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ABSTRACT

The Urban University and Neighborhood Network, a group dedicated to bringing together Ohio's urban universities and neighborhood-based organizations (NBOs), has been studying NBO access to the Internet. Of 189 Ohio NBOs responding to a survey, only 3 have full access to the Internet. The small size and small budget of many of the state's NBOs (only about half of Ohio's NBOs have budgets greater than $100,000) make it difficult for them to acquire computer technology, to learn how to use it for Internet access, and then how to make the most of that access. In many cases, especially for issues related to funding and legislation, the Internet may be the best single source of information. Many of Ohio's NBOs need financial assistance to obtain adequate hardware and Internet access. In addition, most NBOs, especially those in working and middle class neighborhoods, need training and technical assistance, especially for advanced applications such as telecommunications and Geographic Information Systems software. An appendix lists researchers and project participants. (Contains 23 references.) (SLD)

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Limited Access:
The Information Superhighway and Ohio's Neighborhood Based Organizations.

Urban University and Neighborhood Network

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LIMITED ACCESS:
THE INFORMATION SUPERHIGHWAY AND
OHIO'S NEIGHBORHOOD BASED ORGANIZATIONS

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SUMMARY

Of 189 Ohio urban neighborhood-based organizations responding to a survey, only 3 have full access to the Internet. The small size and small budgets of many NBOs (only about half of Ohio's NBOs have budgets greater than $100,000) make it difficult for them to acquire adequate computer technology, learn how to use it for Internet access, and make the most of that access. Even among better-funded organizations, however, there is a lack of Internet access, partly because time pressures prevent them from developing the necessary skills to use the Internet efficiently.

The lack of NBO access to the Internet is important because so much information is now available there. In some cases, the Internet is the best and most efficient source of information. Information on technical assistance, relevant laws, pending legislation, and funding opportunities are both highly valued by NBOs and difficult to get. In some cases, such as pending legislation and funding opportunities, the Internet is probably the best single source of information.

It is quite clear that many of Ohio's NBOs need financial assistance to obtain adequate hardware and Internet access. Additionally, most NBOs--even those in working and middle class neighborhoods, need training and technical assistance especially for advanced applications such as telecommunications and Geographic Information Systems software. Internet access needs to be more uniformly available and affordable to NBOs. Finally, we need to continually think of the Internet as a resource, not a substitute, for local communities.

INTRODUCTION

In highway planning, a "Limited-Access Highway" is a restricted space. It divides the landscape and separates those who can use the road from those who cannot. Bicycles, pedestrians, and slow moving vehicles are not allowed on these highways. Further, Limited-Access Highways are sometimes "toll roads." Not only must potential users have access to appropriate vehicles, they must also sometimes be able to pay the access fee.

The information superhighway--the vast network of computers that make up what we call "the Internet"--is, so far, a limited-access toll road. The physical requirements for getting on the highway--a fast computer with plenty of hard-disk space and a super-fast modem to send and receive data--are expensive. And while there are some "freenets" available in some cities, often the toll for full access to the Internet, usually through a commercial service provider, can be hefty. Finally, learning how to drive on the information superhighway requires time and access to training and technical assistance--and all three are in short supply.

Even more so than for real highways, there is inequality of access to the information superhighway (U.S. Department of Commerce, 1995; Working Group Against Information Redlining, n.d., Anderson et al., 1995, Buck, 1996). People of color, people living in poverty, and their organizations, lack the resources to access the Internet. This matters, as the Internet is less and less an "option" for anyone who must compete in society for scarce financial and information resources. Increasingly, the Internet is the ONLY PLACE where some kinds of information can be found. Additionally, information on things such as government programs is already so much easier to obtain from the Internet (taking minutes of "Web surfing" instead of hours of transferred phone calls and then weeks of waiting for the mail to arrive). Census data, foundation data, community development program information, and a wealth of other kinds of information are all readily accessible from the Internet. For individuals, even jobs are posted on local Internet systems.

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Those who lack access to the Internet, then, will lose out in an increasingly competitive environment. They will also lack the contact with others, available through Listservs, e-mail, and other forms of Internet communication, that can help them overcome the destructive impacts of that competition.

This reality is especially important for neighborhood-based organizations, or NBOs. NBOs are often small organizations. While many NBOs have 501(c)(3) IRS tax-exempt status, many others do not. Generally, NBOs are governed or directed by a board of directors drawn from their neighborhood. They focus on problems that manifest themselves in their neighborhood--abandoned housing, poor street maintenance, crime, health, education, environmental threats, and many other issues. Because so many NBOs are small, geographically isolated, and woefully underfunded, their members often don't have efficient access to the information needed to understand all aspects of their neighborhood problems and the paths toward solutions. Their neighborhood members, usually working full-time jobs outside of their NBO involvement, don't have time to be put on hold six times in the city bureaucracy to solve a problem. They don't have time to go to the downtown library and research grant possibilities. And they don't have access to the travel opportunities to learn how NBOs in other places are solving similar problems. This is true even for those NBOs representing working class and middle class neighborhoods where time and information constraints also hinder the NBO members' ability to solve local problems.

The Urban University and Neighborhood Network (UUNN) is a group dedicated to bringing together Ohio's urban universities and NBOs in a collaborative relationship that recognizes the unique skills and expertise of each participant. We have been studying NBO access to the Internet over the past year. This report documents our results and points to some of the paths we can pursue to increase NBO access to the Internet, and thus increase NBO capacity to solve neighborhood problems.

BACKGROUND AND METHOD OF THE STUDY

We have conducted this research following a "participatory" or "collaborative" research method. In each of the seven cities of the UUNN (Akron, Cincinnati, Cleveland, Columbus, Dayton, Toledo, and Youngstown), we recruited NBO participants to core groups, expanding on the model developed by the Policy Research Action Group (PRAG) in Chicago. Each city had a formal core group consisting of a university-based researcher, a research assistant, 4-5 NBO representatives, and in some cases one or two others. The core groups have served as guides for the entire research project. Core groups met early on to determine the questions of this research and the population to be surveyed. Then they reviewed multiple redrafts of the survey instrument. After the researchers gathered the results the core groups reviewed and commented on a draft of this research report. The core groups also played a strong role in outlining the conference where this report is being presented.

The researchers administered a mail survey to the population of NBOs identified by the core groups in each city--30 in Akron, 162 in Cincinnati, 160 in Cleveland, 70 in Columbus, 68 in Dayton, 104 in Toledo, and 19 in Youngstown. Each four page survey was sent with a cover letter and consent form. The consent form asked the neighborhood organization for permission to use a portion of the information in a database accessible via the UUNN's web site. In most cases the executive director or organization president completed the survey, though in some cases staff members completed the section asking for technical information on the organization's computer. After various combinations of mail and phone follow-ups, the returns ranged from approximately 20 percent to 33 percent across the cities. In total, 189 surveys were returned. Much of the lack of return can be accounted for by the fact that many very small organizations were included in the populations we surveyed. If we look only at those organizations believed to have 501(c)(3) tax-exempt status, the return rate probably ranges between 50 percent and 90 percent across the cities. The smaller and less stable the organization, the less likely they were to return the survey.

The definition of NBO was also slightly different across the cities. Cincinnati included a network of neighborhood-based environmental groups in their definition. Youngstown included public housing tenants organizations. Columbus involved settlement houses. Toledo, Cleveland, and Cincinnati have strong community development corporations. What unites all of these organizations is their focus on issues at a neighborhood level, whether that neighborhood is a public housing complex in Youngstown or a hillside neighborhood in Cincinnati.

The results of our analysis are presented in the following sections. The graphs are organized to present the number, not the percentage, of NBOs responding in any category. Additionally, on some questions not all NBOs gave complete information on a question, so totals may be less than 189.

OHIO'S NBOs--THEIR CAPACITIES, THEIR ISSUES

Who are Ohio's NBOs? The 189 organizations in this study reflect the trends and range of organizations working on neighborhood issues. As figure 1 shows, most are small, with annual operating budgets of less than $400,000. In fact, the largest single cluster of NBOs in every city except Cleveland have budgets of $100,000 or less. Approximately half of all NBOs are in this category. Staffing levels of these organizations are correspondingly low. Only half of the NBOs have more than two staff members.

The case of Cleveland is important to consider for a moment, both because it is an exception and because it is not. With probably the most extensive network of NBOs of any city in the state, Cleveland's NBOs are better staffed and better funded than in other cities. What we also notice in this research, however, it that while Cleveland's NBOs stand out in their budgeting and staffing characteristics, they are not different in other important ways. Cleveland's NBOs do not concentrate on any issue proportionally more than in the other cities, they do not show proportionally more Internet access, and they do not show significantly different levels of need. On the other hand, numerically there is a stronger core of organizations in Cleveland that are using computers, and are accessing the Internet, and the Cleveland "Neighborhood Link" local Internet network is being built on that strong core. In that sense, Cleveland has less work to do in establishing an initial infrastructure (getting a core of organizations trained, computer equipped, and Internet-ready) but has the same amount to do proportionally.

What issues are Ohio's neighborhood-based organizations focusing on? The core groups came up with a master list of issues that NBOs confront, and we asked all the respondents to check how important those issues were to their organization. As figure 2 shows, NBOs ranked all the issues as at least somewhat important. There is a concentration on the traditional NBO areas of community organizing, community safety, economic development, and housing. But most NBOs also rate the other issue areas--environment, health, social services, and workforce development--as at least somewhat mportant.

NBO INFORMATION NEEDS

If we are going to do research on NBO Internet access, we need to be convinced that Internet access will be of benefit to NBOs. NBO staff and volunteers are already terribly overworked. Time and again we have heard from the NBOs that they have tried the Internet, and they couldn't find what they wanted quickly, so they gave it up. We have also heard their frustrations at trying to find grant money, trying to meet application deadlines they found out about too late, and trying to plan extremely complex projects with little to no technical assistance. In justifying this research, one of our most important concerns was whether NBOs already had adequate access to needed information and whether the Internet could provide more efficient access to more information.

Our core groups determined that six information areas are most important to NBOs, and figure 3 bears out their judgment. The kinds of information most important to NBOs are information on their service areas and on funding opportunities. Information on relevant laws, pending legislation, and technical assistance are also important. Interestingly, obtaining information on what other organizations are doing received the fewest "very important" votes, but the most "somewhat important" choices. This may only be a matter of priorities, as learning what other organizations are doing will not be very helpful if you don't know your own backyard, and don't have any funds or technical assistance to begin with.

Most important for this research are NBO evaluations of how easy those kinds of information are to obtain. Clearly, as figure 4 shows, none of it is easy to get. But legal, legislative, funding, and technical assistance stand out as the most difficult kinds of information to access.

This is very important, since NBOs are most concerned with helping neighborhood communities help themselves, both by removing the barriers to self-help and finding the resources. To remove the barriers they have to impact legislation. To find the resources they have to know where to look. They also have to avoid mistakes--by knowing the laws impinging on them, getting technical assistance, and learning from the mistakes and successes of others. Of these categories at least three--pending legislation, funding, and technical assistance--can now be obtained from the Internet, perhaps more effectively than from any other source. Even local population statistics can be obtained from U.S. Census data on the Web, and city governments can make vast amounts of information available on such things as zoning laws through a Web site. We will explore all these possibilities in a later section.

THE BASICS--NBO COMPUTER HARDWARE AND SOFTWARE

What is the existing computer capacity of NBOs and what do they use computers for? Computers are more than just the Internet, especially for NBOs, who often have to manage constantly changing membership lists, keep track of complex financial dealings, produce newsletters, and prepare intensely detailed grant applications. Many have far more to do than their computer hardware allows. For example, many NBOs talk about the need to share computers, leaving one staff member sitting and waiting while another staff member finishes their work. Of the 130 NBOs with staff, only 53 have at least as many computers as staff, though it is difficult to measure just how many NBOs are hindered by too few computers, since a number of organizations have staff engaged in production work where shared computers meet everyone's needs. This is also one of the areas where the cities differ. As figure 5 shows, Cleveland NBOs are the most likely to have their own computers, followed by Akron and Columbus. Toledo, Dayton, Cincinnati, and Youngstown are less likely to have their own computers. In addition, 20-40 percent of NBOs in Toledo, Akron, and Youngstown have no access to computers.

What are NBOs doing with their computers? We asked that by asking them what kinds of software they have and use regularly, the results of which appear in figure 6. NBOs do not let their software go to waste. While word processing is

clearly the most commonly used software on NBO computers, software for manipulating information, such as database and spreadsheet programs, are also used regularly. Desktop publishing, a must for NBOs who depend on flyers and newsletters for getting the word out, is also popular. In each case, over two thirds of those who have the software use it regularly.

The two kinds of software most conspicuous by their absence in this analysis are telecommunications and Geographic Information Systems (GIS) software. One of the reasons that NBOs may neither have nor use this software is because of inadequate computer hardware. GIS software, which can provide enormous useful information on local conditions, requires both operator skill and large computer capacity. Telecommunications software, in order to effectively access the Internet, also requires up to date computer hardware with fast modems.

Can NBOs get on the Internet now? For many of them, the technology they have to "surf the 'net" is comparable to surfing a wave with a sheet of plywood--it might work but it's not pretty. We asked NBOs a variety of technical questions about their computer hardware, and our results in this section should be interpreted a bit cautiously because of the number of surveys that checked "don't know" for some items. But that is telling in itself. Part of the difficulty in getting Internet access is knowing how to, which requires training and technical assistance. None the less, a significant barrier, which we will explore in this section, is the technology itself.

We asked NBOs to give us information on their "most advanced" computer. Thus, it is possible that some NBOs have more than one computer that is Internet-ready. Our concern, however, was whether an NBO had any computer that was Internet-ready. The basic standard we used in evaluating whether NBOs had adequate hardware consisted of the following: For IBM compatible computers, which were the vast majority, we required a Windows 3.1 or Windows 95 operating system (the old "Disk Operating System" or DOS worked fine for basics, but it cannot handle most graphics applications, and most new generation computer users don't even know how to use it), minimum 386 processor, minimum 33MHz operating speed, minimum 8MB Random Access Memory, minimum 400MB hard drive space, and a minimum 14,400 bps modem. For Macintosh computers, which were just over ten percent of the total, the minimum operating system is 7.0, and the minimum hard drive size is 250MB, with the other characteristics being the same.

What are these things? The ***operating system*** is a computer program that makes everything else work. It is the program that makes sure all of your other programs (word processing, spreadsheet, etc.) can communicate with your computer and with each other. The ***processor*** (the "Pentium" is now the most well-known) is the part of the computer that all of your software has to communicate with. It determines the bottom line of what kinds of things your computer can and cannot do. The ***operating speed*** is how fast the processor does things. ***Random Access Memory***, or ***RAM***, determines how much you can do at one time and how fancy you can make it look. The more RAM, the fancier the graphics you can use, the more data you can analyze, and the more quickly your computer will work. The ***hard drive*** is the place where all the software sits. Like RAM, the more hard drive space, the more you can do and the fancier you can do it. Finally, the ***modem*** is what allows your computer to call other computers on the telephone. The higher the "bauds per second" (bps) rating, the more information your modem can send and receive in a second. Here again, the more information you have, and the fancier the graphics, the faster the modem needed.

Because the World Wide Web is becoming so graphics-intensive, and because of the need to transfer large amounts of information between organizations, anything less than the standards we have listed will provide little more than frustration. And it is clear that even those NBOs who do have Internet access are frustrated. Here is what we found:

#1. Total NBOs replying: ***189***
#2. Number of NBOs in #1 with computers: ***134***
#3. Number of NBOs in #2 with adequate operating system: ***98***
#4. Number of NBOs in #3 with adequate processors: ***88***
#5. Number of NBOs in #4 with adequate processor speed: ***67***
#6. Number of NBOs in #5 with adequate RAM: ***48***
#7. Number of NBOs in #6 with adequate hard drives: ***37***
#8. Number of NBOs in #7 with fast enough modem: ***16***
#9. Number of NBOs in #8 with telecommunications software: ***11***
#10. Number of NBOs in #9 with an Internet service provider: ***3***

That's not many. More disturbingly, those NBOs that did not respond to the survey, because they are smaller and less stable, are even less likely to have adequate Internet access.

Of the NBOs that don't have computers, many use the computers of others--their members' private computers, or those of other NBOs. This is especially the case with those small NBOs that do not have their own offices. We did not count those shared computers because they are generally not accessible to the organization but are owned privately by an organization member who personally fills the group's computer needs. Of the remainder, the list dwindles very quickly when you apply

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all the standards. Also, as mentioned, there are a number of NBOs out there probably quite frustrated with their attempts to access the Internet. Twenty eight NBOs actually indicate they have an Internet service provider, but they lack important hardware and software to make their access really work for them. We also suspect that many of these 28 Internet accounts are held by individuals rather than by the NBOs, since only 15 NBOs indicate budgeting for Internet accounts. Of the Internet accounts held by NBOs, many are probably limited to only sending and receiving brief e-mail messages. Finally, while 51 NBOs indicate they have telecommunications software, only 25 indicate they actually use the software. But that is still 10 more than have budgeted for Internet accounts. A number of NBOs with telecommunications software may not use it for communicating with other computers at all, but as a telephone. A few NBOs with more than one computer use the software to create an in-house network. Of the remainder, those who do use telecommunications software to dial into the Internet probably only use it for brief e-mail communication.

NBOs AND THE INTERNET--HOW MUCH SO FAR?

How much do NBOs know about what they need? What steps have they been taking to meet their own needs? We measured this by asking NBOs what they had spent on their computer needs and what they planned to spend. As illustrated in figure 7, over the past four years only 73 NBOs indicated they had been able to buy computer hardware. Their expenditures average out to $3,069 per organization--a figure that drops to $2592 when you take out two large expenditures of $20,000 to establish community computing centers. Only 22 organizations had been able to spend funds on computer training. Only 26 had spent funds on computer technical assistance. And only 16 had been able to spend funds on Internet access.

We also asked NBOs about their future budget plans for computer and Internet expenditures, also shown in figure 7. Only 50 were able to budget for new hardware, and only 16 of those were NBOs that had not previously budgeted for hardware. Consequently, only 89 NBOs--less than half--can be expected to have adequate computer capacity through their own budgeting. The situation is similar for training expenditures. Thirty-seven NBOs indicate their future budgets hold funds for computer training, but only 21 of those had not budgeted for training in the past. Thirty five organizations plan to expend funds on computer technical assistance in the future, but only 20 of those have not budgeted for this in the past. And while 40 NBOs have future budget plans that include Internet access expenditures, only 24 of those have not previously budgeted for Internet access.

There is another important dimension to the issue of NBO expenditures on computers. We are seeing the development of three groups--the haves, the have a little need mores, and the have nots. And they can be distinguished at least partly by their budgets. For example, on the issue of hardware expenditures: Of the 92 organizations that neither budgeted for computers in the past nor the future, 65 of them have budgets of $100,000 or less. Of the 27 organizations that have spent money on hardware in the past and plan to spend more in the future, only five have budgets of $100,000 or less. These figures show that there is a small group of NBOs, probably less than a quarter of the population, that will be Internet active shortly, if they are not already. There is another group, larger, who are limping along, who need various combinations of training, education, hardware, software, and technical support--not to mention financial support to afford those things--to get all they can out of their computers and the Internet. There is a third group that has difficulty affording stamps and paper, let alone computers. For them a different strategy may be necessary, as we will see below.

WHAT DO NBOs WANT?

It is possible to think that part of the problem of NBO Internet access is an education problem--all we need to really do is inform NBOs what they need and they can go get it. That is clearly not the case with start-up costs. NBOs need help affording the computer hardware, software, training, and technical assistance (TA). And it is not just financial help. They also need folks who can do the leg work. We have talked to a number of NBOs who each month say this is the month they will sign up for Internet access. But they do not have the time to do the research to make the smart decisions. They need people who can devote themselves full-time to advising NBOs on their computer needs, shop for them, fix the bugs and glitches, and slowly help them fend for themselves. The fact that so many NBOs have not budgeted for computer technical assistance does not mean they do not need or want it. In fact, technical assistance is a good example of the problem of getting NBOs up and running on the Internet. It is not worth it for any single NBO to devote funds to a single staff person who can fill their computer TA needs. What they could use is a TA pool that a number of NBOs can access, but the coordination involved in setting that up is beyond most NBOs' stressed schedules.

NBOs increasingly recognize the importance of the Internet and other advanced computer possibilities, as indicated by their expressed software needs and training needs. figure 8 shows that the two most popular software needs are for telecommunications and GIS. Geographic Information Systems (GIS) software is extremely sophisticated, and probably has the most stringent hardware requirements to use effectively. Desktop publishing also stands out as a need, illustrating the desire of NBOs to move beyond basic computer applications like word processing to more sophisticated programs.

figure 9 shows NBO training needs. The fact that less than half of all NBOs want training in any software category can be interpreted in a number of different ways. It probably does not mean that most NBOs think they have all the skills they need.

Rather, the lack of emphasis on training probably shows the realistic perspective of many NBO practitioners. Some NBOs may not have checked the box for "needing training" when they didn't have the software to begin with. If more had the software, more would probably want the training. But among those who did indicate training needs, telecommunications stands out, showing a growing interest in the Internet among NBOs. Desktop publishing, database, and GIS training was also popular.

What NBOs really want is to be able to do their work better. We have been told by those directing other projects to "help get NBOs on the Internet" that we must not let the technology drive the project. The purpose of helping NBOs get Internet access should not be based on the Internet's current popularity, but because Internet access will help NBOs do their work better. In our discussions with Ohio NBOs, we have heard skepticism that learning how to use the Internet is really worth it. So in the next section we ask:

IS THE WEB WORTH IT?

The most interesting data set from the survey is the second section asking what information is most important to the organization and how accessible the information. Some of these access difficulties can be resolved with the use of the Internet; either through the WWW (World Wide Web), gopher, newsgroups, Listservs, FTP (file transfer protocol), or telnetting. LibertyNet of Philadelphia has the most expansive project in development. They established "Neighborhoods Online" in the summer of 1994. The project includes a strategy for recruiting and training neighborhood-based nonprofits to use the Internet, a WWW site to help groups access the information they are interested in, and a long range plan to link like-minded groups through e-mail (Buck, 1996).

Finding information about specific neighborhoods over the Internet is currently not efficient. There is no doubt that obtaining information about a specific neighborhood is best accomplished in that neighborhood. What is available on the Internet is census data. Census information and maps on a national, state, city and tract level can be found at the U.S. Census site (http://www.census.gov/). Some cities are developing web pages that include information on zoning laws, garbage pick up, and crime statistics. A few are so interactive that people can electronically fill out forms concerning zoning violations or criminal activity. The city of Palo Alto has a page full of parking information from where to pay parking fines. They also include information on alternative forms of transportation and a list of phone numbers of city officials (http://gatekeeper.city.palo-alto.ca.us:80/palo/city/), and a searchable database of business information. Some cities have pages of very specific program information such the homepage of HUD Homes Seattle (http://www.towercom.com/sthud/) which links to information on HUD homes, bidding procedures and a list of available properties. Among Ohio cities, Cleveland's NeighborhoodLink (http://little.nhlink.net/nhlink/homepage.htm) is the most advanced Web site of this type.

While gaining information about other NBOs was not at the top of Ohio NBO information needs, some of that information is available on the Web as well, especially through the UUNN Web site (http://131.183.70.50/DOCS/UUNN/UUNN.HTM). Other neighborhood based organizations can be found at sites such as LibertyNet in Philadelphia, and the National Housing Institute's pages (http://www.nhi.org). NHI also publishes articles on the WWW from the magazine ***Shelterforce***. The importance of "community networks"--allowing people and organizations to link together through the Internet--may also make it easier, and therefore more valuable, for organizations to link together (Benton Foundation, Morino Institute, Buck, 1996; Schneider, 1996; U.S. Department of Housing and Urban Development; Cavallini, 1996). Currently, you have to locate other organizations somehow, and then you have to call them, too often long distance. The Web makes other organizations easier to find and Internet communication such as e-mail can make them cheaper to contact.

All of the organizations replied that information concerning relevant laws is important but half stated they have difficulty accessing this information. Relevant Federal laws are the easiest to access on the Internet. There are vast amounts of federal government sites on the WWW and gopher but the most useful for NBOs are Thomas and the HUD homepage. Thomas is a complete text of House and Senate bills current and from last year searchable by word (http://thomas.loc.gov). The HUD homepage also links to HUD's "gopher," both of which are full of information concerning current laws and programs. A specific example of what HUD has to offer is its link to the Information on Empowerment Zones/Enterprise Communities which includes an implementation guide, a map of EZ/EC communities and the regulations involved (http://www.ezec.gov). Ohio legislation on the Internet is getting better all the time as the State improves its web site. You can search what Ohio government departments are available through http://www.ohio.gov/. The majority of the organizations also replied that pending legislation is important but access can be difficult. Full text of pending federal legislation can be accessed through Thomas and discussions of these bills can be found on Handsnet through their alerts and forums (http://www.igc.apc.org/handsnet).

Most of the organizations surveyed replied that funding opportunities are important and that access to this information is difficult. The WWW has lists of foundations, some foundation sites and government sites sporting information on federal grants and programs. The HUD WWW and gopher offer access to most of their programs including information on Community Development Block Grants. Additionally, a number of Web sites that now provide links to Foundation and government funding Web sites.

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Most of the organizations replied that information about technical assistance is also important. Replies to the question of access varied from very easy to very difficult. Government assistance information can be found on HUD's Community Connections page

(http://www.teleport.com/~mrtom/comcon.html) which is a HUD program attempting to use computers and telecommunications to connect the residents of assisted housing properties with jobs, services and opportunities. The National Telecommunications and Infrastructure Administration homepage (http://www.ntia.doc.gov) offers a link to its funding opportunities. One of the most useful WWW pages on this topic is the Contact Center Network's list of Organizations that Can Help Get You a Computer (http://www.contact.org/orgs/cmptr2.htm). The Pratt Institute, famous for their work in community organizing and development, now maintains a Web page as well, with links to technical assistance (http://www.pratt.edu/picced/index.htm).

The benefits of using the Internet for direct contact with other NBOs should also not be overlooked. The establishment of an Ohio NBO Listserv would help NBOs maintain contact with each other. A Listserv is a mass e-mail system. Once you "subscribe" (by sending an e-mail to the list saying you want to subscribe), you can send questions and information to the entire list by sending it to just one address. There are also Internet "chat" programs that allow users to set a time to exchange information with each other and get replies immediately. The Internet makes it more possible to engage in joint projects on a short timeline because you can send a draft of a grant proposal over the Internet and it will arrive at its destination in minutes rather than days, and you won't have to try to feed 50 pages through a fax machine. Likewise, you can "download" (copy from another computer to your computer) grant guidelines right off the Internet, rather than waiting sometimes weeks for them to arrive.

POLICY RECOMMENDATIONS

The forgoing has attempted to show both the potential of Internet access for NBOs and the barriers to that access. As a consequence, this study leads to four recommendations:

1. Startup costs need help: This is the most important issue facing any attempt to reduce the lack of NBO access to the Internet. The overall costs are not enormously high. $50,000 in a single city can move 25 NBOs from no Internet access to full Internet access. But for individual NBOs to come up with $2,000 ***is*** difficult. Foundations can chip-in. Local corporations can chip-in. Service providers can chip-in. With the exception of on-line access, these are one-time costs and, if shopped for wisely, will require only modest future expenditures on hardware and software upgrades. It is also important to understand that, while NBOs without staff or offices need access to publicly available Internet-ready computers, NBOs with staff and offices need in-house Internet access. In many cases, staffed NBOs already provide computer capacity to unstaffed NBOs. And if staffed NBOs need to get in their cars to go to a public access site, it is no more convenient than what they are already doing, which is sitting on hold on the telephone, or driving to the library to look up grants. Public access sites are only an option for those NBOs with no office to put a computer in.

2. Pooled Training and Technical Assistance Need to be Organized and Must be Convenient: Each city needs to have a pool of technical assistance available to provide continual assistance for NBOs as they become accustomed to advanced computer and Internet use. Likewise, pooled training sessions need to be offered. Our research showed no strong differences across the cities in their preferences for training, so it might be possible to offer multi-city training sessions. However, at a Cincinnati follow-up core group meeting, NBOs emphasized that the biggest obstacles to gaining Internet access was finding the time to get training. Thus, local training sessions might better meet NBO needs. Finally, central locations need to manage Web sites such as the UUNN site, maintain Listservs, and continually update the Web information relevant to NBOs so NBOs don't have to waste their time finding it.

3. Internet Access Needs to be Uniformly Available: We do not know what the future will hold. It is possible that Internet access costs will be comparable to cable TV costs for the time being. It is also possible that, as the competition produced by deregulation of the telecommunications industry slows, Internet access costs could rise, especially as cities move to cable Internet access rather than dial-up access. We need to work now to help contain the costs of Internet access and Web site construction and help NBOs in meeting those costs. Fully functioning and accessible freenets also need to be further developed. Because the Internet is so new, there is unusual potential for NBOs to help develop access policy at all levels and help make sure the Internet is available and remains affordable to everyone for the foreseeable future.

4. Internet Communication is not a Substitute for Face to Face Communication Of this we could not be more certain. NBOs are about building local communities. Whatever we do, we need to recognize that the purpose is to strengthen local communities, not replace them with "cyberhoods" (Utne Reader, 1995).

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Appendix: Researchers, Project Assistants, Core Group Members, and Other Contributors

This research project is the direct result of a great many people's efforts. From the researchers who coordinated the research in each city, to the project assistants who did everything from follow-up on survey nonrespondents to locate computers for Internet training, to the core group members who helped develop the list of those to be surveyed and helped develop the survey itself, this project has come together. Those directly involved in each city are listed below.

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There are many others who helped out in a crisis, performed a service, and added to the success of this project even though they were not involved throughout the process. They deserve recognition as well.

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